

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/50382

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B65C9/40 B65C3/06 B65C9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 419 782 B1 (JOHNSON DAVID A ET AL) 16 July 2002 (2002-07-16) column 1, line 18 column 2, line 12 - line 17 column 2, line 51 - line 56 column 5, line 37 - line 44 column 7, line 29 - line 32 column 7, line 67 - column 8, line 23 figures 1,2,5	1,2,7,9, 10
X	US 6 220 330 B1 (O'BRIEN JR TERRENCE E) 24 April 2001 (2001-04-24) column 4, line 11 - line 18 column 4, line 67 - column 5, line 4 column 5, line 31 - line 35	1,2,9,10
A	US 6 428 639 B1 (RETZLAFF STEVEN A ET AL) 6 August 2002 (2002-08-06)	
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

17 December 2003

Date of mailing of the international search report

29/12/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Martínez Navarro, A.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/50382

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 342 461 A (MURPHY WILLIAM J) 30 August 1994 (1994-08-30)	
A	EP 1 097 871 A (KHS MASCH & ANLAGENBAU AG) 9 May 2001 (2001-05-09)	
A	DE 201 15 480 U (HEUFT SYSTEMTECHNIK GMBH) 16 May 2002 (2002-05-16)	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/50382

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6419782	B1	16-07-2002	NONE
US 6220330	B1	24-04-2001	NONE
US 6428639	B1	06-08-2002	AU 6338900 A 05-02-2001 BR 0012544 A 21-05-2002 CA 2379678 A1 25-01-2001 CN 1361729 T 31-07-2002 EP 1216151 A1 26-06-2002 JP 2003504287 T 04-02-2003 WO 0105590 A1 25-01-2001 US 2003034111 A1 20-02-2003
US 5342461	A	30-08-1994	US 6325877 B1 04-12-2001 US 5843252 A 01-12-1998
EP 1097871	A	09-05-2001	DE 19953255 A1 10-05-2001 BR 0005237 A 19-06-2001 EP 1097871 A1 09-05-2001
DE 20115480	U	16-05-2002	DE 20115480 U1 16-05-2002 WO 03024808 A2 27-03-2003